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08/269,323 06/30/94 NIMITZ

J 2124001D

EXAMINER

ANTHONY, J

ART UNIT

PAPER NUMBER

2203

DATE MAILED:

11/04/94

22M1/1104
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This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☒ Responsive to communication filed on 6/30/94 ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), — days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice of Draftsman's Patent Drawing Review, PTO-948. |
| 3. <input checked="" type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449. | 4. <input type="checkbox"/> Notice of Informal Patent Application, PTO-152. |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474. | 6. <input type="checkbox"/> |

Part II SUMMARY OF ACTION

1. ☒ Claims 141-156 are pending in the application.
Of the above, claims — are withdrawn from consideration.
2. ☒ Claims 1-140 have been cancelled.
3. ☐ Claims — are allowed.
4. ☒ Claims 141-156 are rejected.
5. ☐ Claims — are objected to.
6. ☐ Claims — are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on —. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).
10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on —, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed —, has been ☐ approved; ☐ disapproved (see explanation).
12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. —; filed on —.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

EXAMINER'S ACTION

DETAILED ACTION

1. Claims 141-156 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Independent claim 141 is unclear in what is meant by the phrase, "placing a blend containing a fluoriodocarbon . . .". What is meant by a blend? Is this a blend of different fluoriodocarbons or of a fluoriodocarbon with another additive? If so, how does the additive of claim 143 further limit the scope of claim 141?

Independent claims 141 and 156 are further indefinite because they are drawn to a method of fire-extinguishing but the claims contain no statement that a fire-extinguishing amount of fire-extinguishant is used.

2. Claims 143 are rejected under 35 U.S.C. § 112, fourth paragraph, as being of improper dependent form for failing to further limit the subject matter of a previous claim.

The further limitation of "additives" to claim 143 is not deemed to further limit claim 141 from which it depends, because of the use of the indefinite phrase, "placing a blend" found in claim 141.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

5. Claims 141-143, and 156 are rejected under 35 U.S.C.

§ 102(b) as being anticipated by Dale U.S. Patent

Number 3,480,545.

Dale teaches a method of controlling the spread of fires. The method involves applying a flame inhibiting gel composition comprising: 1) halogenated saturated or halogenated unsaturated carbons and hydrocarbons. Specifically disclosed examples of halogenated compounds are: 1,1,2,2-tetrafluoro-1,2,-diiodoethane,

and 1,1,1-trifluoro-2,2-difluoro-2-iodoethane. The above examples are given by way of illustration not by way of limitation (see column 2 lines 24-40), and 2) a gelling agent selected from napalm soaps.

6. Claims 144, and 152-154 are rejected under 35 U.S.C. § 103 as being unpatentable over Dale U.S. Patent Number 3,480,545 optionally in view of Nimitz et al. U.S. Patent Number 5,102,557 or Robin et al. U.S. Patent Number 5,117,917.

Dale has been described above. Dale differs from applicant's claimed invention in that Dale does not seem to directly teach mixtures of fluoroiodocarbons with another halogenated fire-extinguishing agents selected from hydrofluorocarbons, perfluorocarbons, or fluoroethers. Nevertheless, Dale does directly teaches these said hydrofluorocarbons and perfluorocarbons as being individually effective fire-extinguishing agents according to his invention.

Nimitz et al. teaches fire-extinguishing compositions comprising mixtures of halogenated alkanes selected from hydrofluorocarbons and perfluorocarbons. Some specifically taught species are: tetrafluoroethane, difluoroethane, and perfluorocyclobutane. Nimitz also teaches that the use of iodine containing halogenated alkanes are known fire-extinguishing agents (see column 1 line 25-28).

Robin et al. teaches fire-extinguishing compositions and methods utilizing compositions comprising perfluorocarbons optionally in admixture with hydrohalocarbons. Some specifically taught species are: decafluorobutane, hexafluoroethane, pentafluoroethane, heptafluoropropane, and tetrafluoroethane.

It is deemed by the examiner that applicant's claimed invention is obvious over the teachings of Dale alone, because mixtures of different halogenated carbons and halogenated hydrocarbons are so well known in the fire-extinguishing art. To form mixtures of fluoroiodocarbons with other halogenated carbons or halogenated hydrocarbons would thus be at once envisaged by one having ordinary skill in the art. Applicant's particular claimed mixtures are further obvious over the teaching of Dale since he directly teaches applicant's claimed species of fluoroiodocarbons, fluorocarbons and fluorohydrocarbons. The courts have declared that to employ two or more materials in combination for the same purpose they are taught as being individually useful is not patentable, In re Kerkhoven, 205 USPQ 1069 (CCPA 1980), and In re Crockett et al., 126 USPQ 186 (1960). The Nimitz and Robin patents are optionally combined with Dale to attest to the above fact that it is very well known in the art to make mixtures of different halogenated fire-extinguishing agents. The fact that Nimitz directly suggests the use of fire-extinguishing agents that contain iodine in column 1 lines 25-29 adds weight to the fact that mixtures of iodine

containing hydrocarbon fire-extinguishing agents with fluorocarbons or hydrofluorocarbons have already been alluded to in the prior-art.

7. Claims 145-151 are rejected under 35 U.S.C. § 103 as being unpatentable over Dale U.S. Patent Number 3,480,545 in view of The article "Next-Generation High-Efficiency Halon Alternatives", by Nimitz et al. optionally in view of either Nimitz et al. U.S. Patent Number 5,102,557 or Robin et al. U.S. Patent Number 5,117,917.

This rejection builds on the rejection made in section 6 of this office action.

Dale's fire-extinguishing compositions and methods have been described above. Dale differs from applicant's claimed invention for the reasons given in section 6 of this office action and because Dale does not directly teach applicant's claimed species of fluoroiodocarbon namely, trifluoroiodomethane. Nevertheless, Dale directly teaches the use of fluoroiodocarbons as effective fire-extinguishing agents. As stated, by Dale in column 2 lines 24-31, the particular taught species of fire-extinguishing agents were given by way of illustration not by way of limitation.

The Nimitz article directly teaches various species of fluoroiodocarbons that are useful fire-extinguishing agents. Not only does Nimitz directly teach Dale's taught species of

fluoriodocarbons, but he also teaches the use of trifluoriodomethane as an effective fire-extinguishing agent.

It would have been obvious to one having ordinary skill in the art using the combined teachings of references as the motivation to the use Nimitz's directly taught trifluoriodomethane in the fire-extinguishing compositions as taught by Dale. Not only is Dale directly open to fluoriodocarbon species not specifically taught by him, but the Nimitz reference directly teaches in Table 4 the general fire-extinguishing equivalence between trifluoriodomethane and Dale's 1,1,1-trifluoro-2,2-difluoro-2-iodoethane species. One having ordinary skill in the art would thus be motivated to use trifluoriodomethane as a fire-extinguishing agent in the fire-extinguishing composition as taught by Dale.

8. Claim 155 is rejected under 35 U.S.C. § 103 as being unpatentable over Dale U.S. Patent Number 3,480,545 in view of Uchida et al. U.S. Patent Number 4,459,213.

Dale has been described above. Dale differs from applicant's claimed invention in the Dale does not directly teaching using a fluoroether as an additive to his taught fire-extinguishing compositions.

Uchida teaches fire-extinguishing compositions comprising: 1) a protein, 2) a polyhydroxy compound, 3) halogenated hydrocarbons and halogenated carbons, and 4)

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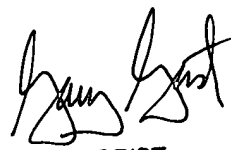
optionally adjuvents such as surfactants. In column 4 lines 1-3, fluorine surface active agents are taught as being optionally employed in the compositions.

It would have been obvious to one having ordinary skill in the art using the combined teachings of the references to add a fluorine surface active agent to the composition as taught by Dale. This is obvious for a number of reasons such as: 1) Dale directly teaches that surface active species are a requirement for his composition. Dale's only requirement for the surface active compounds is that napalm soaps be included. Furthermore, the use of a fluorine surface active compounds, such as fluorinated ethers, in fire-extinguishing compositions that contain halogenated carbons and halogenated hydrocarbons is well known in the art as taught by Uchida. Finally, applicant's specifically claimed species of fluoroethers are deemed to be within the suggestions of Uchida and would in any case be within the skill of the ordinary artisan to use since they are all well known species.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph D. Anthony whose telephone number is (703) 308-044.

J.D.A.

October 28, 1994


GARY GEIST
PRIMARY EXAMINER
GROUP 2200